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POV  
FATALITIES  
56  
THRU MAR FY00  
40  
THRU MAR FY01

# ARMY GROUND RISK-MANAGEMENT PUBLICATION

# COUNTERMEASURE

VOL 22 NO 5

<http://safety.army.mil>

MAY 2001

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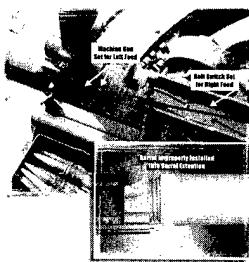
The Official Safety Magazine for Army Ground Risk-Management



## Proper Use of HMMWV 2-Point Seatbelts

A HMMWV is a lethal weapon if the lap belt is not adjusted properly.

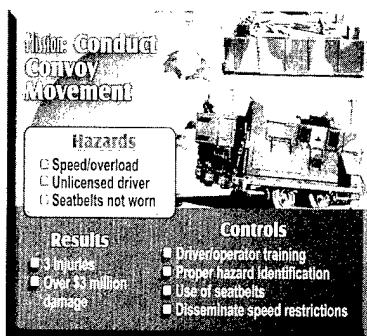
Page 6



## When Things Start Going Wrong

The author explains the mass confusion surrounding this live-fire training exercise. The result was an injured soldier.

Page 7



## Investigators' Forum

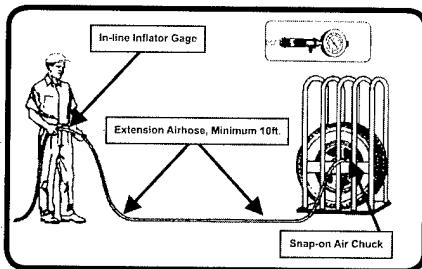
This unit learned a tragic lesson when they failed to check relevant safety messages when they received new equipment.

Page 12

## Tire Cages Are a Must!

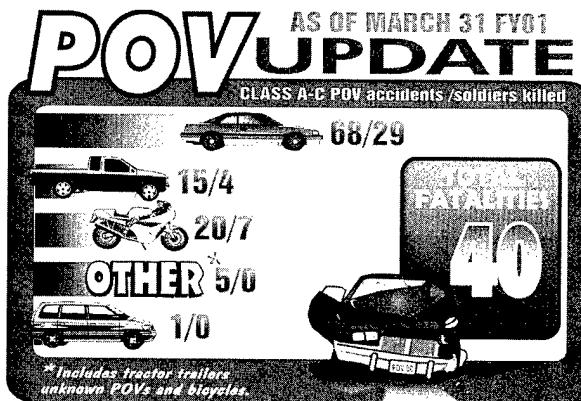
You better believe there's danger if a split rim separates and it's not in a tire cage.

Page 13



## Features

Safety Center Half-Time Report	3
Haste—Top Accident Producer in Tracked Vehicles	4
Safety Alert Notice—2-Point Seatbelts	5
Proper Use of HMMWV 2-Point Seatbelts	6
When Things Start Going Wrong	7
Looking Beyond Identifying and Assessing Hazards	10
Tire Cages Are a Must!	13
Guidance on HEMTT Wheel Assembly & Inspection Procedures	14
If Daddy Had Only Known	15
Hit the Road, Jack!	16
Now Showing—"Driver's Dozen"	16
<b>NCO Corner</b>	
Chain of Circumstances	8
<b>Investigators' Forum</b>	
The Rest of the Story	12



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*Gene M. LaCoste*

Gene M. LaCoste  
Brigadier General, U.S. Army  
Commanding Officer

# Safety Center Half-Time Report

Halfway through this fiscal year, the Army has some good news. During the first two quarters of FY01, the Army reduced the number of Class A ground accidents from 81 to 70 in comparison to the first two quarters of FY00.

The most notable improvement is evident in the reduction of Army motor vehicle (AMV) Class A accidents from 10 to 4 during this timeframe. This is a 60-percent reduction from the previous year and 42 percent below the 3-year average.

POV Class A accidents also declined from 55 to 40 during this timeframe. This reduction of nearly 30 percent over the previous year is a great improvement. However, we still have room to improve, as POV accidents remain the biggest killer of soldiers as well as the leading cause of severe injury.

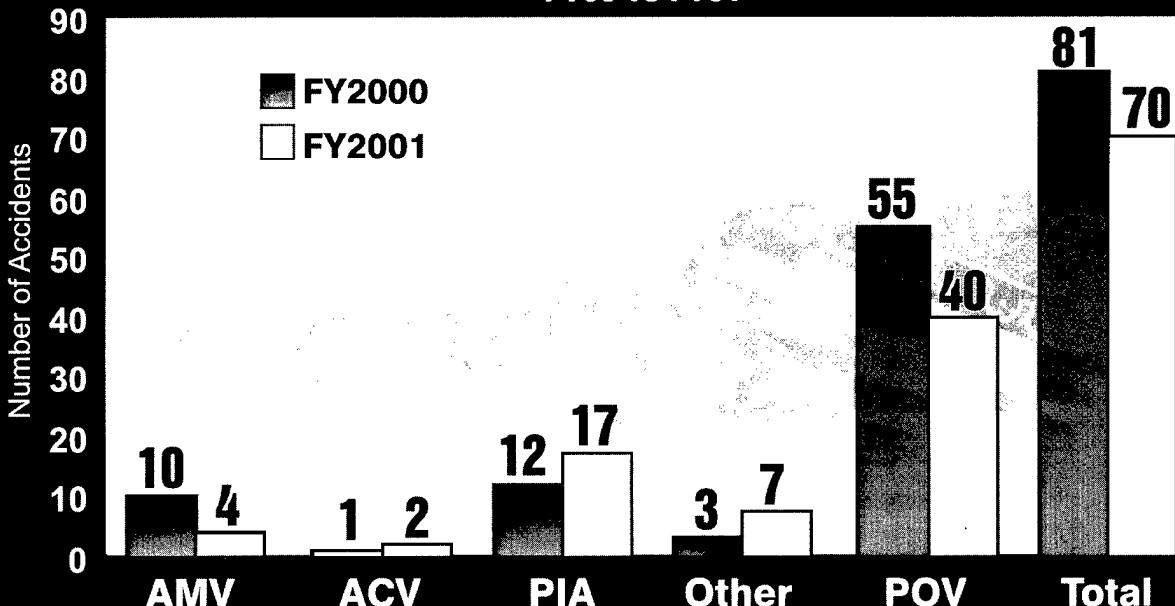
Unfortunately, the significant reduction in AMV and POV accidents is offset by the increase in Class A Army combat vehicle (ACV) accidents, personal injuries, and "other" accidents. Army combat vehicle accidents

increased from 1 in FY00 to 2 in FY01. Personal injury accidents increased from 12 in FY00 to 17 in FY01. Four of these accidents involved mishandling weapons that resulted in fatalities. Carbon monoxide poisoning was the next leading cause of death claiming the lives of three soldiers. "Other" accidents increased from 3 in FY00 to 7 in FY01, of which 5 were fire fatalities.

In summary, the Army has improved in reducing the number of Class A ground accidents in the first half of FY01. Commanders and leaders are achieving these gains in a challenging environment of expanding missions, variety in areas of operation, equipment modernization, and changing force structures. However, we can do better. As we move into the second half of FY01, make a renewed commitment to practice risk management in all operations.

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**On-duty Class A Ground Accidents for Mid-year Performance  
FY00 vs FY01**



As of 31 March 2001

# Haste—Top Accident Producer in Tracked Vehicles

The Army Safety Center did a review of all tracked vehicle Class A-C accidents over the past 18 months. Of the 57 accidents reviewed, 20 of them occurred due to soldiers being in a hurry.

Being in a hurry is nothing new to Army soldiers. However, driving a 70-ton combat vehicle faster than conditions permit places yourself and others in serious risk.

During a coalition-training event, an M1A2 tank in a wedge formation went up a hill and dropped down the other side. Unfortunately, the other side was much steeper and deeper than expected. The driver's head was thrown forward and backward from the impact, resulting in minor whiplash. Damage to the tank consisted of one shattered road wheel, two cracked road wheels, one damaged hub, and replacement of both idler arms. If the tank commander (TC) had directed the driver to slow down as he drove over the crest, this accident would not have happened.

When we are in a hurry, sometimes things get overlooked. Failure to conduct or improperly conducting preventive maintenance checks and services (PMCS) can have drastic consequences.

While preparing for a mounted movement, an M113 driver failed to conduct a proper PMCS. If he had, he would have found numerous worn track shoe bushings and metal-on-metal wear on track shoes, placing the vehicle in a not-mission-capable (NMC) status. Although the condition was not corrected, the driver drove the M113 faster than the authorized speed limit; the track shoe abruptly separated and the vehicle overturned, fatally injuring the driver. The TC and the two passengers received minor injuries.



Even though the driver is tasked to conduct and document the PMCS, the entire platoon leadership is responsible for ensuring the required maintenance is completed and documented. The TC and section sergeant did not ensure that the PMCS was conducted and reported to standard. Were they in a hurry as well?

In too much of a hurry for seatbelts? A soldier in an M2A2 Bradley felt that way. During a movement to contact, the Bradley hit a bump, causing everyone in the rear to come up off their seats. The soldier without his seatbelt hit his head on the top of the crew compartment and was knocked unconscious. He was evacuated to the hospital and diagnosed with a mild concussion.

When asked why he wasn't wearing his seatbelt, he stated that it took too long to buckle when getting in the vehicle and too long to unbuckle when departing the vehicle. Remember, whether you are in a privately owned vehicle (POV) or a combat vehicle, it is an Army requirement to wear seatbelts.

These are merely three examples of numerous case studies reviewed in the Safety Center. This "hurry-up" attitude is not specific to any certain location; it seems to be throughout the Army. Hurrying increases the chance for human error and therefore, the risk of an accident. Leaders must ensure that subordinates understand that the mission must be completed to standard and not just to time. We all need to raise the flag when time allotted will not permit us to accomplish our tasks to standard. Shortcuts can lead to damage, injury, and death. There is no need to be in a hurry for an accident.

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October 18, 2000

## **SAFETY ALERT NOTICE— 2-POINT SEATBELTS**

Recently the Army experienced a tragic accident involving a variant of the High-Mobility Multipurpose Wheeled Vehicle (HMMWV) family of vehicles. This vehicle utilized a 2-point seatbelt restraint system common to older versions of the HMMWV. What makes this accident especially tragic is that the driver of the vehicle was wearing his seatbelt during the course of the accident. Unfortunately, he was not wearing it correctly.

The Army recognized a significant hazard associated with the standard 2-point seatbelt restraint system in the HMMWV. While the seatbelt is retractable, it does not contain an inertial stopping device that most civilian vehicles have as standard equipment. This means that the user must remove all slack from the retractor and tighten the seatbelt snug across the body. Failure to do so prevents the seatbelt from performing as designed and endangers the user. Instructions on proper wear of the seatbelt and warnings about the hazards associated with this seatbelt are posted in TM 9-2320-280-10.

The 2-point seatbelt system is currently being phased out. Modification Work Order 9-2320-280-35-2, dated 1 Jun 96, outlines the procedures for installation of the 3-point seatbelt restraint system for basic versions of the HMMWV. Until the completion of these modifications, commanders should do the following:

- Warn personnel of the hazards associated with the 2-point seatbelt restraint system.
- Train personnel on the correct procedures for use of the 2-point seatbelt restraint system.
- Rigidly enforce the requirements of AR 385-55 for mandatory seatbelt use in all vehicles so equipped.

Additionally, commanders should review maintenance and inspection procedures for all vehicles containing the 2-point seatbelt restraint system. Ensure all warnings are posted (on the vehicle and in applicable TMs) and adhered to during all types of operations.

**—BG Gene M. LaCoste, Director of Army Safety**

# Proper Use of HMMWV 2-Point Seatbelts

The high mobility multi-purpose wheeled vehicle (HMMWV) was initially fielded over 15 years ago as a replacement for the M151 Jeep. Although it is a rugged vehicle and has many significant safety improvements over the M151, it is not invincible.

In fact, over 30 soldiers have been killed while riding in the HMMWV over the past 15 years. Almost half of these fatal injuries resulted during rollover accidents. In approximately half of the rollover fatal accidents, the person killed was either not wearing the available restraint system or not wearing it properly. Others were killed in frontal collisions where passenger restraints were not worn. Despite what you may

think about restraint use,

statistics

prove that this is your best defense against injuries when involved in a moving vehicle accident.

Unlike a sport utility vehicle (SUV), the HMMWV is not designed with padded dashboards and soft interior surfaces. In fact, because of the HMMWV's mission, it is usually equipped with numerous radios, electronic gear, weapons, ammo cans, and numerous other hard surfaces. These items can cause severe injuries if the vehicle occupants are thrown into them during an accident. HMMWVs are also operated in much more severe terrain than the typical commercial SUV. As a result, wearing passenger restraints in the HMMWV is extremely important to your personal safety.

Early HMMWVs were only equipped with

lap belts. While it is common to see lap/shoulder belts with pretensioner and multiple air bags in today's commercial vehicles, lap belts were the type of restraints used in this class of vehicles during the early 1980s.

Although lap belts have been replaced by lap/shoulder restraints in newer HMMWVs, the lap belts in older vehicles provide significant benefits in crash situations. In order for the lap belts to work properly, however, they must be properly adjusted. In our POVs, we simply pull out the restraint far enough to allow the connection of the buckle latching mechanism. During a crash, the belt retractor will lock and restrain us from further movement. The HMMWV lap belts do not

have this locking feature. *The lap belts on the HMMWVs must be fully extended from the retractor and adjusted for size by pulling the loose webbing tab to secure the belt. If this procedure is not followed, the person will not be properly restrained in a crash.* A soldier recently received fatal injuries in a rollover accident due to the lap belt not being properly pulled out and adjusted from the retractor. As the HMMWV rolled over, the belt unwound and the soldier slipped out of

the loosened belt.

Older HMMWVs will eventually be equipped with lap and shoulder restraint systems. A maintenance work order exists to make structural modifications and install shoulder restraints in the older vehicles. Until then, you can be protected by the lap belts by following three easy steps: (1) fully extend the webbing, (2) secure the latch, and (3) pull the loose webbing end to remove the slack. You must ensure the restraint fits snugly across your hips each time the restraint is used.

**POC: George Jarvis, TACOM System Safety Engineer  
Team Leader, DSN 786-5636**



# When Things Start Going Wrong...

This accident happened almost a year ago, and it nearly cost a soldier his life. This was one of those needless accidents caused by leaders not properly planning and preparing for training in accordance with FM 25-101 and FM 25-100. Sometimes when one thing starts going wrong, other things start going wrong too....

## What happened?

It was going to be a simple training exercise for weapons familiarization, prior to the unit conducting an upcoming live fire exercise. The commander developed a training plan; however, he failed to incorporate the 3 phases of marksmanship instruction outlined in FM 23-65.

The big day for the familiarization live-fire exercise finally arrived, and we started moving the unit to the range. Initially, little things started to go wrong: First, there was confusion about the range OIC; after that, some of the ammo was late getting to the range—and some ammo never made it at all; and then, a rainstorm hit.

After the rain, the unit began firing their weapons. One of the weapons, an M-2HB .50 caliber machine gun immediately started to malfunction; it would only fire one round and then stop. The commander had to send the unit armorer back to pick up

more M-16 magazines, and unfortunately, he had taken all the manuals and tools for the M-2HB machine gun weapon with him.

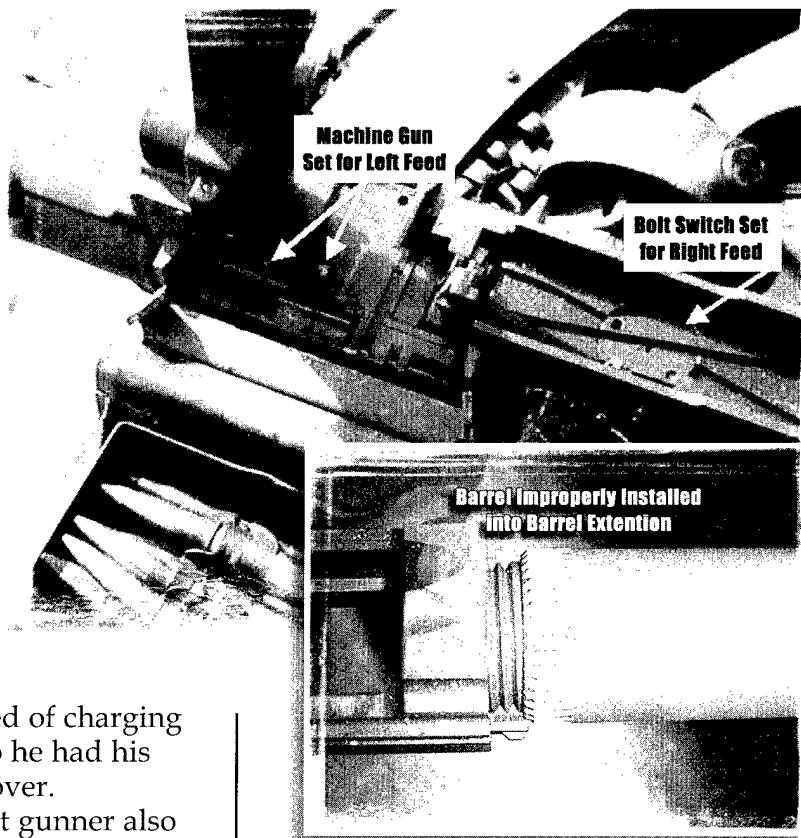
The commander told his soldiers to keep working through the problem. After a while, the primary gunner got tired of charging the weapon, so he had his assistant take over.

The assistant gunner also had problems firing. He attempted to fire the M-2HB, but it was doing the same thing for him, firing one or two rounds, and then stopping. On his third attempt, a shell case ruptured outside of the chamber, sending a small piece of shell casing into his leg.

## Why?

As I started looking into the accident, a lot of information became apparent. The weapon failed to fire properly on two previous occasions, and the unit failed to properly troubleshoot and repair the malfunctions on the machine gun.

The unit also failed to provide trained instructors on



the range for the M-2HB machine gun. The unit was not familiar with the weapon, nor did they go outside the unit to find someone to assist them in the training. Regrettably, no one noticed that the bolt switch was set for a right hand feed and the rest of the weapon was set for a left hand feed. Failure to properly set headspace and timing in accordance with TM 9-1005-213-10 resulted in a case rupture that caused the accident.

Headspace and timing checks are critical to firing the M-2HB machine gun. The armorer set the headspace and

timing on the machine gun before the start of firing. However, it is the responsibility of the gunner to check headspace and timing on the machine gun. This requires the unit to properly train the machine gun team on the fundamental operation of the weapon before firing the weapon. Again, no one else was familiar with the procedure to set the headspace and timing, and they did not have the technical manuals or tools there to reference.

Inadequate and incomplete training can increase risk if not controlled. You had better know what to do when things suddenly start going wrong.

### Lessons learned

There are many lessons to be learned from this accident:

- For low-density weapons training, get assistance from outside subject matter experts.
- Ensure adequate contingency plans are made; i.e., technical manuals/tools are on-site and weather reports

are monitored.

■ Properly plan, prepare and resource training in accordance with FM 25-101.

■ Provide trained and qualified instructors from preliminary marksmanship instruction (PMI) for qualification of soldiers.

■ Conduct a thorough range-safety brief.

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# NCO Corner

## Chain of Circumstances

Some of us have developed the attitude that accidents happen only in untrained, undisciplined units. Well, I have news for you. While well-trained, disciplined units have shown lower accident rates, there is a chain of circumstances that—like the full moon—can affect even the best of the best. And we must be aware of it in order to combat it.

Highly trained units—those that have been trained to standard—are aware of the dangers of their particular missions because they've done a risk analysis and been safety briefed. They know the variables.

However, the chain of circumstances is ever ready to deliver its special knockout punch. It comes in links of fatigue, haste, weather, errors, personal problems, lack of supervision, command pressure, and plain old Murphy's Law. The links are self-perpetuating, always adding on. The chain continues to grow. Just as we think we are squared away, another link in the chain will appear, wrapping around the unit, tying up our ability to accomplish our mission safely.

For example, an NCO and a private were working the Tactical Operations Center (TOC) radio watch in the command track extension of their M577. The private noticed the track

extension was starting to get cold because the stove had run out of fuel. The private hooked up another can of fuel to the stove; however, he didn't know that he had used a can of MOGAS, and an air lock had formed in the fuel line.

The NCO, who had been sleeping, awoke and began to give the private a hand. The NCO disconnected the fuel line and blew the line clear. When he reconnected the line, fuel splashed on the floor near the hot stove. The fuel ignited, catching the NCO on fire. He dropped the fuel line and grabbed his field jacket to smother the fire. The canvas floor of the TOC was in flames, and the fire was spreading to the walls. No fire point had been established and no fire extinguisher was immediately available.

The private ran to find a fire extinguisher, and in his haste, he fell and dropped it. He couldn't find it in the smoke-filled TOC. The M577 could not be moved quickly because it had been parked between large trees. The NCO was burned and the vehicle was destroyed.

This accident happened several years ago, but brings to mind the words of a former commander of mine. He said, "Hope is not a plan." You can't hope that nothing goes wrong because you haven't planned for it. The chain of circumstances isn't affected by hope; it's forged in lack of planning.

As leaders, we can combat this chain only

by continuing to train, supervise, and create awareness in our soldiers concerning the chain. As we recognize the potential for an accident—near the end of a long FTX, for example—we should gather our soldiers together and explain in real terms the real hazards they face and why. Then we must eliminate the hazards, so that we can take our soldiers and equipment home at the end of the FTX. Managing risks is a continuous process, not a one-time thing.

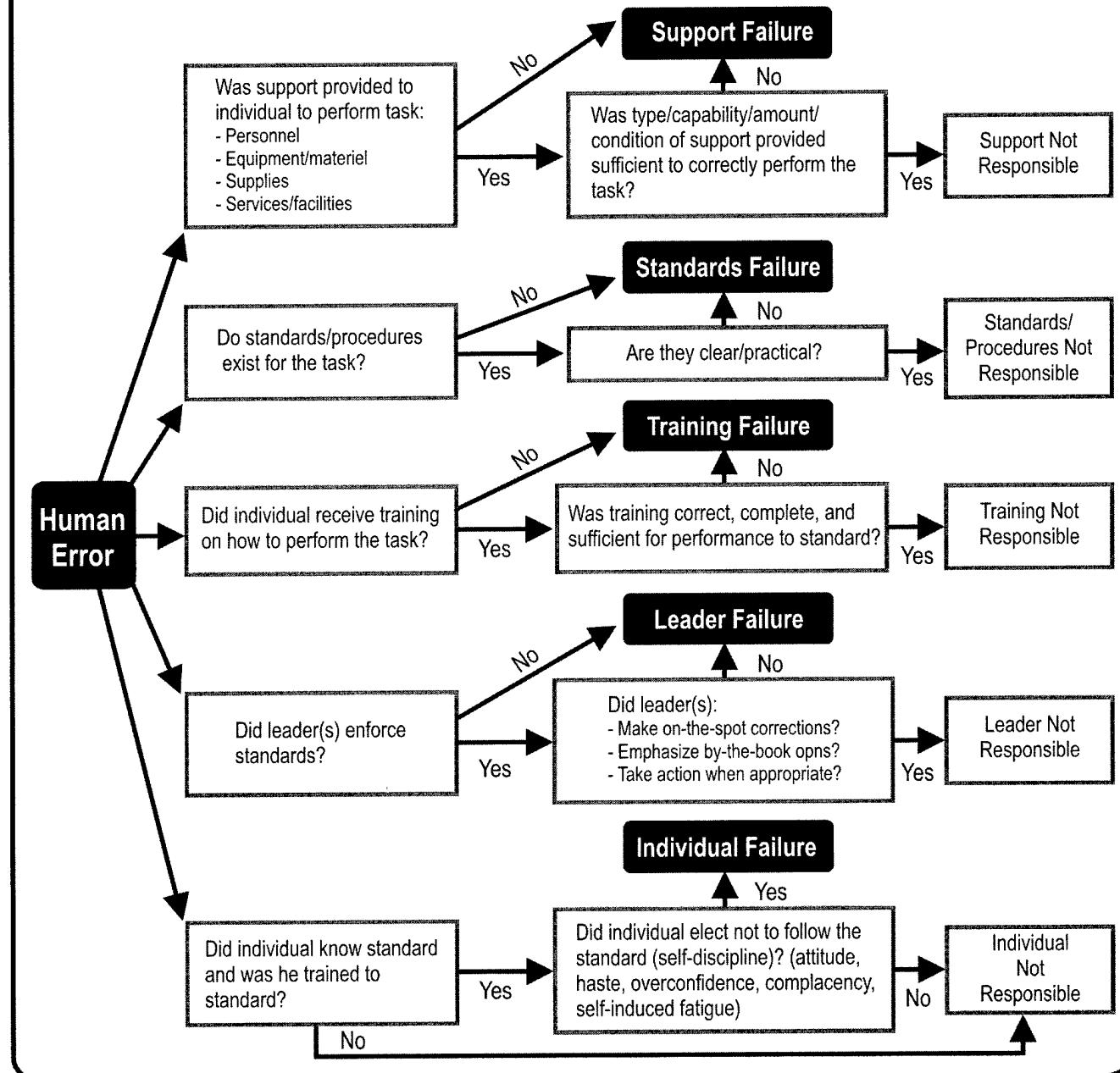
Every time you return from an exercise with

all your soldiers and equipment, you've broken the chain of circumstances. Evaluate how you did it, spread the word, and continue to build on the excellent foundation you have established.

## Soldier safety: NCOs make it happen!

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torresj@safetycenter.army.mil

### Determining System Inadequacy(ies) Responsible for Human Error



# Looking Beyond Identifying and Assessing Hazards

This article, the third in a series on the risk management process, focuses on Step 3: "Developing controls and making risk decisions."

When Safety Center personnel conduct accident investigations, they look for the root cause of the accident. One that often stands out is that leaders are not fully applying the 5-step risk management process. The commanders and NCOs of accident units can usually show that they penciled a worksheet. They identified likely hazards. They assigned at least a personal impression of the degree of risk. Then the process broke down. The leaders didn't really carry out Step 3, developing controls and making risk decisions at the appropriate level. Thus, there was no countermeasure to execute, nothing to follow-up.

Too often, risk-reduction controls are never developed, and when they are, they aren't adequate or they aren't implemented. Without that central risk-management step, the first two steps are almost useless and the last two are not properly targeted!

Actually, there are two related phases to this step. Leaders must obviously develop hazard controls before they can make any decisions about them, so I'm concentrating on that aspect in this article. Next month, we'll discuss the second part of Step 3 "Making risk decisions."

Control development hasn't changed since people started thinking about safety in an organized method—most controls can fit into three methods.

■ **Engineering.** Leaders can engineer-out some hazards. Engineering is the most positive and proactive way to control hazards. When the soldiers' equipment, environment, or tasks are permanently changed to remove the hazard, troops can operate more freely without losses.

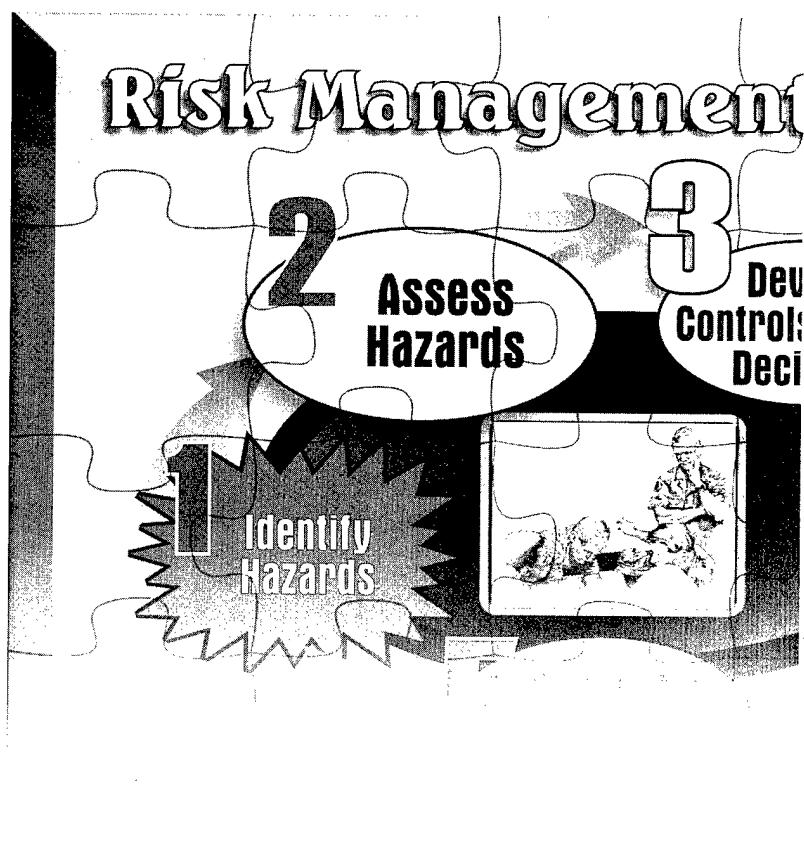
Ideally, engineering begins before the drawing board—when the acquisition folks first design requirements and materiel solutions. In the real world, engineering continues long after equipment is fielded.

Engineering doesn't end when good

equipment gets in the soldier's hands. The state of maintenance and facility upkeep is constantly monitored through the command inspection and work order effort. The Armywide equivalent is the Modification Work Order (MWO). Even MWOs ultimately rely on user-unit leaders to make sure their equipment gets the right priority and doesn't fall through the cracks.

Reengineering a mission doesn't mean abandoning it. Reengineering means finding and maximizing every available advantage—time, equipment, illumination, rest, troop talent, support—all the METT-T factors and more.

■ **Training.** Soldiers can be trained to safely operate around hazards. When hazards can be physically eliminated, they should be. But, much of the time, the Army



operates in situations where engineered controls aren't feasible. This means that when the environment can't be fixed, or the fix is slow in coming, commanders fall back on training.

Soldiers who trigger human-error accidents sometimes don't know how to perform the operation safely. Those soldiers are candidates for more training. If a soldier knows his job, but he chooses to take shortcuts, that's a different problem and requires a different solution (see Enforcement below).

Training is best used to teach soldiers how to operate around risk that can't be further reduced without compromising the mission. Instead, unit commanders sometimes are forced to use training to compensate for hazards inherited from a flawed system or facility. For example, training to improve driving behavior is a good control for the high-risk traffic environment. It's a bad control for a lousy vehicle suspension or defective tires and brakes.

**■ Enforcement.** Leaders must enforce safe standards of unit performance and individual discipline. Just as there are missions and environments that are not safe for any

soldier, we get accident reports on soldiers who would not be safe in any environment, no matter how well-engineered.

Erratic behavior can make any mission a high-risk mission. The most extreme cases are rare, but all units will experience human-error accidents if soldiers are not given effective standards and held to them. If standards aren't enforced, there are no standards.

The standards themselves must be appropriate to the operation. They must be current, they must be suitable, and they must be understood. Standards are not risk controls when they are

out-of-date, or when they call for unavailable resources (such as equipment and the time to use it).

**Standards are not controls when they're in a book back at the head-shed. Army regulations, technical manuals, and SOPs become real standards when leaders communicate them to their soldiers in a way that consistently produces the desired performance.**

That's not always easy, and it's never a one-shot effort.

We've looked at soldiers who don't know or don't understand the standard for safe performance—they are uninformed. Sometimes they don't trust the standard—they are unconvinced. Sometimes they know and understand the rules, but choose another course of action—those soldiers are undisciplined. Effective leaders make soldiers internalize the rules for safe behavior, and act to the standard. They consistently acknowledge and reward soldiers who are doing the right thing the right way, not those who gamble for short-term results by "making it up as they go along."

Internalized discipline, which becomes habitual self-discipline, is essential for on-duty performance to standard. It's even more important off-duty, away from a controlled situation and leadership oversight. Most Army fatalities are caused by off-duty accidents, primarily in POVs. It's the attitudes learned in the unit that protect young soldiers out on the highways.

The unit commander can't reengineer the car or the highway; however, he can have some influence on the timing and conditions of his soldier's trip. Constantly building self-discipline is the way commanders and NCOs reach into the cab of the soldier's pickup.

In planning real-world missions, risk managers will mix and match these control methods. However, none of the methods will have any impact on fatal accidents unless the risk management cycle is *completed*. The developed controls must be executed and monitored. **Somebody has to do it!**

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**Written by accident investigators to provide major lessons learned from recent centralized accident investigations.**

# Investigators' Forum

## The Rest of the Story

**D**uring the conduct of a centralized accident investigation, the accident board and the unit suffering the accident learned a valuable lesson in keeping up with changes, especially safety messages.

The wheeled vehicle accident occurred on a public highway as the unit was traveling to a remote training location. This was the unit's first opportunity to conduct military occupational specialty (MOS) training in quite some time and unit personnel were enthusiastic as they inspected their vehicles.

The day was clear and dry; road conditions were good. The convoy brief specified the route and convoy speed of 50 miles per hour (mph). Just under an hour after the start, an M939A2 began to descend a steep hill. The driver was cautious and made sure the vehicle was traveling at the convoy speed limit.

Things began to go wrong when the trailer that the truck was towing began to fishtail. Then one of the trailer tires blew. The driver fought for control. At the bottom of the hill, the truck went off the road and rolled. Thankfully, the driver and the other occupant received only minor injuries, but the truck was badly damaged.

The board members knew from their training that the two primary causes of tire failure are under-inflation and excess speed. The tires on the truck were serviceable. Five of them still held air and were at, or very near, the proper inflation pressure. The tires on the trailer were new. X-ray examination of the tire carcass showed no defects.

The board next considered excess speed. They interviewed the vehicle occupants regarding their speed. The driver and the vehicle commander insisted that they were doing no more than 50 mph. The State Patrol used a certified traffic accident reconstruction expert to investigate the accident. When contacted by the board, he verified that the vehicle was, in fact, traveling at approximately

50 mph. The board was puzzled by what had caused the loss of control, if not excess speed.

Finally, the board's maintenance subject matter expert asked if the unit was aware of any Safety-of-Use-Messages (SOUMs) or Ground Precautionary Messages (GPMs) on the vehicle. At first, unit personnel said no. They had just gotten their first two M939A2 trucks recently as replacements for older model trucks.

At that point, the board checked the Army Electronic Product Support Bulletin Board via the Internet website <http://aeps.ria.army.mil/> and discovered that there are two safety messages (GPM 96-04, 131807Z and SOUM

## Mission: Conduct Convoy Movement

### Hazards

- Speed/overload
- Unlicensed driver
- Seatbelts not worn

### Results

- 3 Injuries
- Over \$3 million damage

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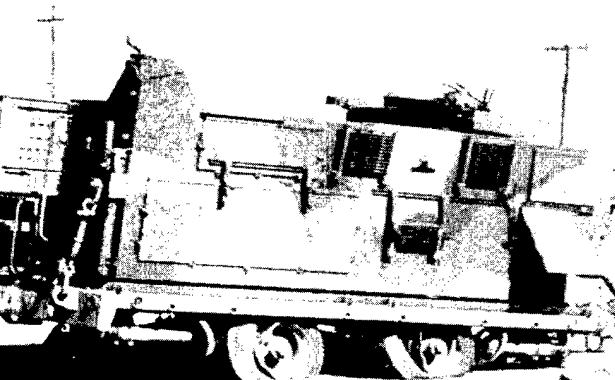
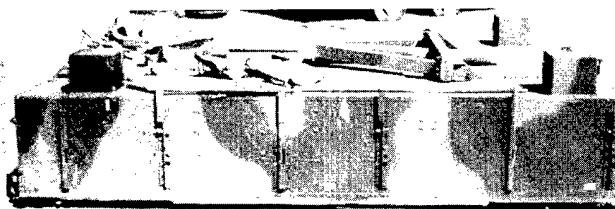
98-07, 081917Z) restricting the maximum allowable speed for M939A2 trucks to 45 mph until antilock brakes and radial tires are retrofitted.

Further interviews with unit maintenance personnel determined that they had seen the messages when they came out. However, since the unit did not, at that time, have any M939A2 trucks, they did not inform the chain of command.

The lesson here is whenever your unit receives new equipment; it is good practice to check all relevant SOUMs and GPMs to ensure that you and your personnel operate the equipment safely. Maybe that is what FM 22-100 means when it says, "Be, KNOW, and do."

You can check current SOUMs and GPMs at <http://aepls.ria.army.mil/> or by calling (404) 464-6204/6293.

**POC: Ground Systems and Accident Investigation Division, DSN 558-3562 (334-255-3562)**



## Controls

Driver/operator training  
Driver hazard identification  
Use of seatbelts  
Disseminate speed restrictions

# Tire Cages Are a Must!

Almost all of us have heard of tire cages, and most of us think we use them correctly. Being a Maintenance NCO for 18 years, I have made more on-the-spot corrections than you could imagine due to soldiers not using tire cages, or using them incorrectly. It is not because soldiers don't want to do the right thing. They do. However, most of the time, the cage isn't available, or soldiers have not been informed of the danger, so they don't use it.

One thing we all can agree on is that a soldier is going to get the job done. To a soldier's credit, it may not always be the correct way, but they will get the job done the best way—and sometimes the only way—they know how.

Is there danger? You better believe there's danger! There is a good chance of losing your life if that split rim separates and it is not in a cage. Not only is the mechanic repairing the tire at risk, anyone in the trajectory zone is at risk. Just this past year, we have had one fatality, numerous injuries, and a lot of close calls.

In September 2000, TM 9-2610-200-14 was released. This manual covers the care, maintenance, repair and inspection of pneumatic tires and inner tubes. One significant change in this TM is that tire cages will no longer be permanently mounted. Page 2-2, paragraph 2-3a(2) states the following: *"Tire safety inflation cages should be freestanding and a minimum of 3 feet away from any object. Never permanently mount a safety cage to the floor or near a wall. Mounting an inflation cage to the floor or near a wall prohibits expected deformation of the bottom plate and equal dissipation of energy released in the event of tire explosion. Permanently mounting an inflation cage to the floor or near a wall could result in failure of one or more of the bars, release of rim components, or shrapnel and/or an unwanted concentration of energy."*

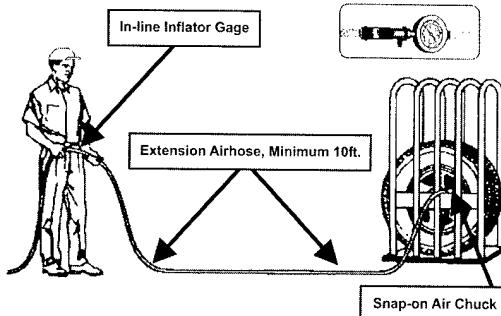
A few other common mistakes include the following—

■ Not using a 10-foot extension air hose with a snap-on chuck. I have actually seen soldiers use the extension, but not stand 10 feet away when using it or stand in the trajectory zone. Obviously doing either of these makes using the extension useless.

■ Attempting to reseat the tire bead or toy with it in some other way while the tire is being inflated. If you are inflating a tire and the bead doesn't seat after 40 psi, STOP and deflate the tire, and then reinspect the tire and rim assembly.

There are more warnings and steps you must take to prevent injury or death. I just mentioned a few common ones that I have seen or heard about. Leaders and soldiers at all levels need to ensure that proper precautions are followed when servicing split-rim tires—it's a MUST, not an option.

In addition, OSHA regulations found in 29 CFR 1910: General Industry Occupational Safety and Health Standards cover split-rim tire servicing. The above requirements are also found in 29 CFR 1910.177: Servicing Multi-Piece and Single-Piece Rim Wheels.



Remember that cages involved in split-rim blowouts must be removed from service and inspected by the manufacturer or a registered professional engineer before being reused. Several other defects listed in this reg require the cage to be removed from service. (OSHA regulations do govern some nonmilitary-specific operations such as tire servicing.)

Editor's note: You can obtain free training material from ACCURIDE Corporation, P.O. Box 40, Henderson, KY

42420; 1-800-626-7096 or e-mail [mawilliam@accuridecorp.com](mailto:mawilliam@accuridecorp.com).

**MSG Timothy Sprucebank, USASC Senior Wheel Vehicle SME, Ground Systems and Accident Investigation Division, DSN 558-3774 (334-255-3774) [sprucebt@safetycenter.army.mil](mailto:sprucebt@safetycenter.army.mil)**

**Risk Management Pointer:**  
**Leaders must ensure soldiers are trained to standard, and that they do not overinflate tires as a way of seating the bead. This unauthorized method can cause explosions.**

## Guidance on HEMTT Wheel Assembly & Inspection Procedures

The Army has issued two Ground Precautionary Messages (GPMs) that deal with heavy expanded mobility tactical truck (HEMTT) wheel assembly: **GPM-00-002**, R 211626Z Oct 99, subject: Tire inflation/deflation procedures, wheel assembly inspection procedures, serviceability criteria, and new pressures

for the HEMTT wheel assembly, TM9 2320-279-10-1(C5), page 2-57 and TM9-2320-279-20-2(C2), page 12-28 and **GPM-00-003**, R 211645Z Oct 99, subject: Mechanics inflation/deflation procedures, wheel assembly inspection procedures, serviceability criteria, for the HEMTT wheel assembly, TM9-2320-279-20-2(C2),

page 12-28. These messages provide detailed procedures to properly inspect, maintain, and determine serviceability of the HEMTT wheel assembly.

Also in Change 5 of the HEMTT -10, it states that an organizational-level mechanic repair and assemble/disassemble split rim tires.

# If Daddy Had Only Known

**I**t was 8 p.m. on 10 July 1996. I had just gotten home from a psychology class at Coker College, at the Fort Jackson, South Carolina education center.

What a great day it had been! It was my oldest son's birthday, and I just received an A on my test.

I picked up the phone to call my son and wish him a happy birthday. I noticed the light was blinking, so I decided to check my messages first. When the message came on, I heard my mother's crying voice say, "Your daddy's in intensive care and we don't know if he'll live or not, come home." 'Click,' she hung up. No explanation.

At that moment, I stood frozen—my brain would not function, my prayers were frozen on my lips. A second seemed like eternity. All I knew was that I had to get home.

I called the hospital in my hometown and asked to speak to any family member. My niece came to the phone. She said my dad had been burned in a gasoline fire that afternoon on the farm. He was currently in intensive care, and if he lived through the night, they would transfer him to the Vanderbilt Burn Center in Nashville, Tennessee the next day.

I called my first sergeant at midnight and informed him of the situation. He told me to get some rest, then go home first thing in the morning, and he would fax me my emergency leave papers the next day.

I didn't get much rest that night. The next morning, I

drove the longest trip of my life, not knowing if my dad would be alive when I got there.

When I arrived at the hospital, my family told me what happened. My dad, who was 73 years old at the time, was planning to burn a wild rosebush that was touching his electric fence. He was afraid the cows would try to eat on the rosebush and break the fence. He took gasoline that was stored in a plastic milk jug and poured it on the rosebush, and then made a trail of gasoline 6 feet away.

He then set the plastic jug, which had a third of the gasoline left in it, beside him. Gasoline has a flash point of -40 degrees and higher. It was about 92 degrees that day. The gasoline vapors, being heavier than air, were encircling my dad without him knowing. When Dad bent over to ignite the trail of gasoline, he went up in flames. The milk jug then exploded at his feet and knocked him backwards about 6 feet into a stack of cedar posts he had cut earlier.

Dad received second and third degree burns over 40 percent of his body. He received skin grafts from his groin area all the way down to the bottom of his feet. Today, his legs look like the skin of a copperhead snake. The doctors said he really needed to have skin grafts on both his arms and chest, but they were afraid he couldn't survive any more surgery. For that reason, those areas are very scarred.

This accident happened 5 years ago this coming July. The

lives of so many were changed forever in just a moment of poor judgment. My entire family saw a giant of a man broken down to a shell of the man he once was. We have all been humbled. As for my dad, he has not had a single healthy moment since the accident, and never will. Not only was he burned and scarred, his respiratory tract is so damaged that he has to take many medications. In addition, he has to take five breathing treatments a day.

However, now working in the safety field, I have learned many lessons about fuel that I wish my dad had known.

■ The fuel should have been stored in an approved container for flammables.

■ When using flammables, you need to understand that there are more vapors when the temperature is hot.

■ Have proper firefighting items readily available.

■ Don't forget to notify someone where you're going, what you will be doing, and when you're planning to return.

■ Use the right equipment for the job; i.e., hedge trimmer and shovel, or if the bush is larger, a chainsaw and axe should have been used.

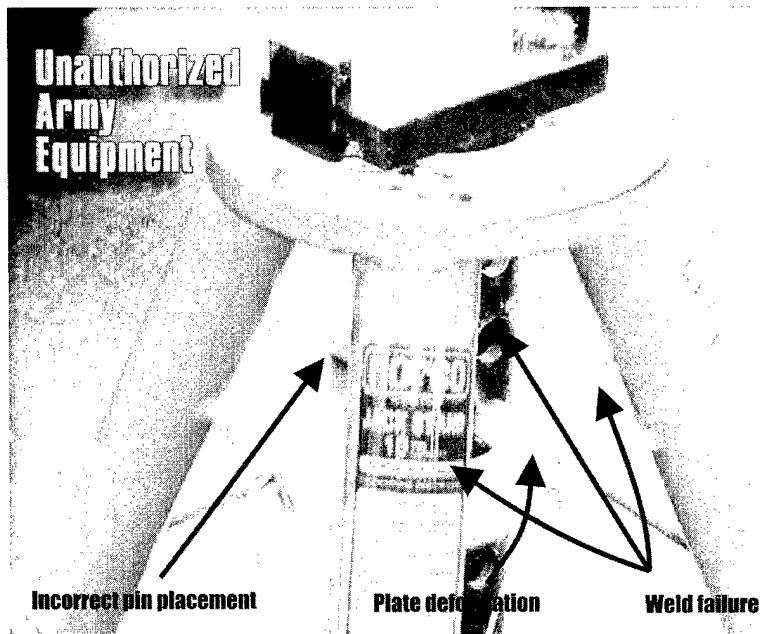
We are around common things, such as fuel, every day and unfortunately, we take it for granted and fail to realize its real danger. Remember to THINK before you strike a match. Just maybe—this will keep a tragedy like this from happening again.

—Courtesy of Orillia (Ria) Martinez, CP-12 Intern, Fort Rucker, AL

# Hit the Road, Jack!

Recently a safety officer from the field requested assistance from the Safety Center on what he thought was a 7-ton jack stand problem. The safety officer contacted the manufacturer and found that his soldiers were using the stand incorrectly. He informed us so we could disseminate this information Armywide.

We contacted TACOM-RI Safety Office who researched this issue further and found that the unit was using 10-ton jack stands that were not approved for use by the Army. Leaders must ensure that all tools and equipment being used and locally purchased meet Army standards.



## Now Showing "Driver's Dozen"

New from the Army Safety Center, "Driver's Dozen," a 15-minute movie highlighting 12 important traffic safety points. Go along with Sergeant Safety while he takes a new soldier around post and focuses on traffic safety awareness. The movie primarily targets soldiers ranging in age from 18-26, new arrivals to installations, Army family members, and new civilian employees; however, it will appeal to all soldiers.

As a new instructional tool, "Driver's Dozen" walks the viewer through important traffic safety areas: speeding, seatbelts,

child safety seats, motorcycles, bicycles, pedestrian, and headphone use while running or skating. Also included are other traffic safety topics, such as vehicle inspections, radar detectors, open alcohol containers, airbags, installation-specific rules, and driver's training.

The video should be part of your installation orientation for new arrivals, introducing them to installation-specific traffic policies and pointers; i.e., known hazardous intersections, roads that are closed during daily PT.

For the new soldier, it is a good eye-opener to how the

regulations governing POVs apply to on- and off-duty, as well as on- and off-post. For the more seasoned soldier, the movie is also a good reminder of traffic safety. The video can be used as a stand-alone training tool for occasional refresher training, or it can be incorporated into an existing or future POV safety course.

If used as intended, "Driver's Dozen" should aid in reducing traffic accidents and saving soldiers.

Order "Driver's Dozen" today! Go to our web site: <http://safety.army.mil> and click on MEDIA - VIDEOS - POV VIDEOS - "Driver's Dozen", PIN #711416.

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